

EMP-Centauri S.168

Eight LNB's on One Cable

There you are, proudly standing over the dish farm in your backyard. You pause to remember how meticulously you aligned each one of them perfectly with that particular satellite. And each one has its own cable running into the house. That sure was a big hole you had to drill through the wall of your house to accommodate all those cables.

Watching a satellite program isn't that much of a hassle either. It doesn't take all that long to switch from one cable to another if the program you want to watch is on one of the other satellites. You suddenly wonder to yourself, "isn't there a better way?" Actually, yes, there is.

Wouldn't it be nice to run a single cable from all of these dishes to your house? Wouldn't it be nice if a single receiver could access each

of these dishes individually? EMP-Centauri, based in the Czech Republic, has come up with a solution to this dilemma with their new S.168 DiSEqC 1.2 switch. Yes, you read correctly...DiSEqC 1.2. But isn't DiSEqC 1.2 for antenna motors? Normally it is, yes, but not in this case.

At first glance, the S.168 looks like any standard DiSEqC switch except that it has eight inputs and a single output. And of

course the "DiSEqC 1.2" logo printed on the top quickly reveals that this is no ordinary switch. The nine connectors are all in standard female "F" format. Just like with other switches, this one is also installed between the receiver and the antennas. Its eight inputs allow up to eight satellite antennas or LNB's to be connected.

The switch can actually be controlled in a number of ways. In addition to DiSEqC 1.2 operation, the switch can be controlled with the DiSEqC 1.1 protocol. The S.168 switch is even compatible with standard DiSEqC 1.0 commands but then only the first four inputs can be used.

Our antenna farm consists of a 3-meter (10-foot) C/Ku-band mesh dish pointed at Galaxy 11, a 1.6-meter (5.3-foot) C-band dish aligned with Intelsat 805, a 1.2-meter (4-foot) Ku-band antenna pointed at Hispasat, a 90-cm (3-foot) Ku-band antenna aimed at Telstar 12, a 76cm Ku-band antenna for Telstar 5 and a small 20-inch dual feed dish pointed at the Nimiq satellites.

The IF outputs from each of these antennas were connected to the eight inputs of the S.168 switch. The output of the switch was routed to the IF input on the satellite receiver. The switch itself was installed in the antenna farm so that the coax cables running to the eight inputs of the switch could be kept as short as possible for the sake of appearance. Make sure that the switch is located in a weatherproof enclosure as it is not water resistant.

By now you've probably figured out that the satellite receiver to be used must be





S.168 Outside of Its Protective Enclosure

DiSEqC 1.1 and/or 1.2 compatible in order to take full advantage of the capabilities of this switch. For DiSEqC 1.1 operation, the uncommitted port is set to 1 in the receiver's menu for inputs 1 thru 4 and to 2 for inputs 5 thru 8. The committed port is then set from 1 to 4 based on the input that is to be addressed. For example, input 7 is addressed as uncommitted port 2 and committed port 3. The S.168 was able to switch between all eight inputs without any difficulties.

If the receiver does not support DiSEqC 1.1, then DiSEqC 1.2 can be used to control the switch. From the receiver's point of view, the S.168 switch is treated no differently from a DiSEqC motor; the receiver should be set up as if there were a DiSEqC motor connected to it. Simply access the menu that contains the receiver's DiSEqC 1.2 motor control settings and treat each satellite antenna input as a different position for the "motor".

Starting with switch position 1, use the receiver's menu to "move" the antenna until the signal strength for the first dish rises significantly. Stop moving, verify that the signal quality is at maximum and store the position. Repeat this procedure for the remaining seven inputs until all the positions have been stored.

Keep in mind that the scanning of the inputs can take as long as one minute and that the actual procedure for setting up motor positions may differ from one receiver to another.

Once the eight positions have been stored, the receiver can now access each of the

switch's inputs individually by "moving" to the desired satellite dish. And unlike the initial setup where the "movement" from one antenna to the next took some time, in normal operation there was no noticeable difference in the time to switch from

one channel to another on different satellites compared to using a standard DiSEqC switch. We switched back and forth between channels on Galaxy 11, Intelsat 805, Hispasat, Telstar 12, etc. and in each case the S.168 switch performed flawlessly.

Expert conclusion



The S.168 is the perfect solution for those that have a substantial satellite antenna farm they can call their own and would prefer to have only one cable routed to their receiver. Up to eight individual dishes or LNB's can be connected to this switch and then accessed individually by a DiSEqC 1.1 and/or 1.2 compatible satellite receiver. The S.168 is also compatible with a standard DiSEqC 1.0 switch.



Ron Roessel
TELE-satellite
Test Center
North America



The S.168 switch is not weatherproof so if it is installed outdoors it must be placed in a proper enclosure to protect it from the elements. When used as a DiSEqC 1.0 switch, only four of the eight inputs can be used.



TECHNICAL DATA

Manufacturer	EMP-Centauri, 339 01 Klatovy, Czech Republic
Fax	+420-376-323-809
E-mail	sales@emp-centauri.cz
Model	S.168
Function	8-input/1-output DiSEqC 1.2 switch
Operational Frequency Range	950-2300 MHz
Insertion Loss	5 dB
Isolation	30 dB typ.
Power Consumption	50 mA
LNB Current	400 mA max